



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,778	01/21/2005	Yasuhiro Komiya	05045/LH	2606
1933	7590	02/12/2009	EXAMINER	
FRISHAUF, HOLTZ, GOODMAN & CHICK, PC			THOMAS, MIA M	
220 Fifth Avenue			ART UNIT	PAPER NUMBER
16TH Floor			2624	
NEW YORK, NY 10001-7708			MAIL DATE	DELIVERY MODE
			02/12/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/521,778	Applicant(s) KOMIYA ET AL.
	Examiner Mia M. Thomas	Art Unit 2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(o).

Status

- 1) Responsive to communication(s) filed on 01 December 2008.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 23,26,29-38 and 42-45 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 23,26,29-38 and 42-45 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 01 December 2008 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date 12/01/08;10/07/08.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
 5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01 December 2008 has been entered.

Response to Amendment

2. This Office Action is responsive to applicant's request for Continued Examination submitted on 01 December 2008. Claims 1-22, 24, 25, 27, 28, 39 and 41 are canceled. Claims 23, 26, 29-37, 42-45 are pending. Claims 42-45 are new. A complete response to applicant's remarks follows herewith.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohsawa (US 6856354 B1) in combination with Gofman et al (US 20040076921 A1), Parluski (US 5,523,786 A) and Cooper (US 5,051,823 A).

Regarding Claim 23: (Currently Amended) An image processing system comprising: a

~~photographing apparatus; and a processing apparatus; wherein the~~

Ohsawa teaches ~~A photographing apparatus comprises comprising~~ ("This invention includes an RGB color camera for photographing an object under photographing illumination light..." at abstract):

Gofman teaches a plurality of light-emitting devices for emitting illumination light having characteristics of spectroscopic distributions varied in at least a visible light range ("In another embodiment of the invention including a one or more blue LED light sources among the plurality of light sources, at least one white LED is included in the plurality of light sources in order to generate an output light beam having a component portion that is characterized as green. In a third embodiment of the invention, a plurality of fiber optic bundles receive the incident light beams, and are arranged at a transmitting end so that individual fibers from the plurality of bundles are randomly combined to form a single output surface for transmitting the output beam." at abstract)

an image pick-up optical system which forms a subject image of a subject illuminated by the light-emitting devices (Refer to Figures 6, 8-10; "Assembly 26 may be preferably constructed with optical fibers having a numerical aperture (NA) of approximately 0.66, and arranged such that individual fibers directed from input surfaces 33 are randomly ordered within the area defined by transmitting surface 34." at paragraph [00037])

Parluski teaches an image pick-up device unit which picks-up the subject image formed by the image pick-up optical system and outputs an image signal ("A color sequential video imaging

system, comprising: a solid state image sensor positioned for receiving the reflected light collected by said optical section..." at column 12, line 4)

Cooper teaches and a control unit which controls the photographing apparatus to capture images in one of a spectroscopic image capturing mode and a moving image capturing mode, selectively ("At the proximal end (not shown) of handle 101 is located one or more connectors for connection, via a cable assembly (not shown) to a video processor and control unit and a source of laser energy." at column 3, line 62) wherein in the spectroscopic image capturing mode, the control unit controls at least a plurality of the plurality of light-emitting devices, which are selected according to the characteristics of the spectroscopic distributions of the light emitting devices, to sequentially light-on, and the control unit controls the image pick-up device unit to capture sequential spectroscopic still images of the subject simultaneously with the sequential lighting-on of the light-emitting devices; and wherein in the moving image capture mode, the control unit one of: (i) controls a single specific primary color or a plurality of specific primary colors of the light-emitting devices selected from the plurality of light emitting devices to sequentially or simultaneously light-on, and controls the image pick-up device unit to capture a moving image while the specific primary color of the light-emitting devices are lighted-on, and (ii) controls a plurality of groups of the light-emitting devices to sequentially light-on group by group, each of the groups including a group of the light-emitting devices that belong to blue in the visible light range, a group of the light-emitting devices that belong to green in the visible light range, and a group of the light-emitting devices that belong to red in the visible light range at least one of the light emitting devices and the characteristics of the spectral distributions of each of the groups being different, and controls the image pick-up device unit to capture a moving image while the groups of the light-emitting devices are sequentially lighted-on ;and

wherein the processing apparatus comprises a calculating unit which performs an image calculation based on an output of the image pick up device. ("As a feature of one embodiment of this invention, the handle of the dental camera includes means for communicating all appropriate signals and fluids to and from the camera head and the laser light emission port, and, if desired, valves and switching means located on the handle for controlling such communication." at column 2, line 65)

Specifically, Cooper teaches a control unit that includes light sources (light emitting devices) to handle all means of communication of all of the appropriate signals for connecting the dental instrument with the laser device and image processing apparatuses.

Ohsawa, Gofman, Parluski and Cooper are combinable because they are in the same field of image processing including dental instruments and devices for light emission elements.

All of the claimed elements were known in the prior art and one skilled in the art could have been combined the teachings of Ohsawa, Gofman, Parluski and Cooper as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

The suggestion/motivation for doing so would have been to create "dental instrument including a laser device and an electronic video dental camera is provided having a single handle and a convenient shape, thereby being readily manipulated by dentists who are universally familiar with the manipulation of prior art dental tools. A dental instrument constructed in accordance with the teachings of this invention includes a handle to be held by the user, a distal portion

which is to be placed inside the patient's mouth, a laser light emission port located at or near the distal end, means for transporting laser light from an external laser source to the laser light emission port, and a camera head located at or near the distal end of the device, with the camera head being formed at an angle to the handle in order to provide a field of view which includes the portion of the patient which is being treated by the laser light emanating from the laser light emission port." at column 2, line 32+, Cooper.

For clarity, the Examiner is stating that Ohsawa teaches a photographing apparatus for photographing an object under photographing illumination light. Further, Gofman teaches a plurality of light-emitting devices and an image pick-up optical system.

Parluski teaches an image pick-up device, while Cooper teaches and a control unit which controls the photographing apparatus. These claim limitations would have been obvious because the substitution of known elements for another would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Ohsawa, Gofman, Parluski and Cooper to obtain the specified claimed elements of Claim 23.

Regarding Claims 24 and 25 (Canceled).

5. Claims 26, 29-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohsawa (US 6856354 B1) in combination with Gofman et al (US 20040076921 A1) and Parluski

Art Unit: 2624

(US 5,523,786 A) and Cooper (US 5,051,823 A) and further in view of Williams (US 2003/0107652 A1).

Regarding Claim 26: (Currently Amended) Ohsawa, Gofman, Parluski and Cooper in combination teach all the claimed elements as rejected above.

Ohsawa, Gofman, Parluski and Cooper in combination does not expressly teach a photographing operating unit which inputs at least an instruction for starting a spectroscopic image photographing operation to capture the spectroscopic still images of the subject in the spectroscopic image capturing mode.

However, Williams teaches a photographing operating unit which inputs at least an instruction for starting a spectroscopic image photographing operation to capture the spectroscopic still images of the subject in the spectroscopic image capturing mode (Refer to paragraph [0089]; specifically, "The grip 712 is provided with a self-reset type pushbutton 717 adapted to reciprocate by means of a spring 717A, an operation cycling mechanism 718 (intermittent rotation mechanism) adapted to rotate 1/N of a full rotation in one direction in response to one depression of the pushbutton 717, and an image pickup device moving mechanism 719 for moving the charge coupled device unit 715 along the optical path (direction indicated by an arrow P in the figure) as given a predetermined amount of displacement by the operation cycling mechanism 718.).

Ohsawa, Gofman, Parluski, Cooper and Williams are combinable because they are in the same field of imaging, specifically with respect to dentistry and color cameras with sequential illumination. (See classification and abstract of each invention).

At the time that the invention was made, it would have been obvious to one of ordinary skill in the art to input at least an instruction for starting a spectroscopic image photographing operation to capture the spectroscopic still images of the subject in the spectroscopic image capturing mode.

The suggestion/motivation for doing so would have been "By depressing the pushbutton 717 plural times (N times), the rotary cam 721 is rotated 360 degrees thereby causing the image pickup device moving mechanism 719 to resume its initial position." at paragraph [0089]. The position of the rotary camera would allow the operator a multitude of options for identifying the most appropriate means of execution." (Williams, paragraph [0089])

Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Williams with the combination of Ohsawa, Gofman, Parluski, Cooper to obtain the specified claimed elements of Claim 26.

Claims 27 and 28 (Canceled).

Regarding Claim 29: (Currently Amended) Williams teaches the photographing operating unit includes a pressing button switch, and the control unit switches between the spectroscopic image capturing mode and the moving image capturing mode in accordance with pressing of

the button switch (Refer to Figure 22, numeral 717-pushbutton switch for image pickup device 719 and Figure 1, numeral 37, external button switch).

Regarding Claim 30: (Currently Amended) Williams teaches the image pick-up device unit comprises a color image pick-up device having a color filter array ("A suitable small charge coupled device camera system 524 is the 0.25" color charge coupled device cameras of Sony Corporation of Japan. This single chip includes the charge-coupled device and the electronics for producing a video signal from the output of the charge coupled device. The charge-coupled device can either provide black and white signals or color signals." at paragraph [0086]).

Regarding Claim 31: (Currently Amended) Williams teaches at least one of the plurality of light-emitting devices has a characteristic of spectroscopic distribution extending between different bands of the color filter array (Refer to paragraph [0086]; specifically, "The charge-coupled device can either provide black and white signals or color signals.).

Regarding Claim 32: (Currently Amended) Williams teaches a spectrum sensor which senses the characteristics of the spectroscopic distributions of the light-emitting devices (Refer to paragraph [0086]; specifically, refer to Figure 17 and 18).

Regarding Claim 33: (Currently Amended) Williams teaches a spectrum sensor which senses a characteristic of spectroscopic distribution of ambient light ("The image sensor 933 is preferably either a charge coupled device (charge coupled device) or an APS (active pixel sensor array). The lens system 932 is located in the distal portion of the median section 912, proximal to the distal end of the hand-piece 911. The movable image sensor 933 is located

proximal to the fixed lens system 932. The lens system 932 transmits the light arriving from the distal end of the hand-piece 911 to the active surface of the image sensor 933." at paragraph [0091]).

Regarding Claim 34: (Currently Amended) Williams teaches a display section for displaying an image based on the image signal outputted from the image pick-up device unit (Refer to paragraph [0090]; specifically, "A video output cable 16 extends from the proximal end of the grip portion 812 for connection with a display such as a monitor TV set. The light source 819 is a halogen lamp and can be exchanged easily.").

6. Claims 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohsawa (US 6856354 B1) in combination with Gofman et al (US 20040076921 A1) and Parluski (US 5,523,786 A) and Cooper (US 5,051,823 A) and further in view of Irwin (US 7,144,248 B2).

Regarding Claim 35: (Currently Amended) Ohsawa, Gofman, Parluski and Cooper in combination teach all the claimed elements as rejected above.

Ohsawa, Gofman, Parluski and Cooper in combination does not expressly teach an abutting portion which is abutted to the subject at one end of the photographing apparatus.

Irwin teaches an abutting portion which is abutted to the subject at one end of the photographing apparatus ("FIG. 7 shows a delivery device that forms a part of the apparatus depicted in FIG. 1..." at column 2, line 60; further refer to column 13, line 55).

Ohsawa, Gofman, Parluski, Cooper and Irwin are combinable because they are in the same field of imaging, specifically with respect to dentistry and color cameras with sequential illumination. (See classification and abstract of each invention).

All of the claimed elements were known in the prior art at the time of the invention. One of ordinary skill in the art could have combined the elements as taught by the combination of Ohsawa, Gofman, Parluski, Cooper and Irwin, by known methods, with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

At the time that the invention was made, it would have been obvious to the skilled artisan to utilize an abutting portion which is abutted to the subject at one end of the photographing apparatus

The suggestion/motivation for doing so would have been to utilize an abutting portion which is "removable from the wand 32 and disposable, or at least conveniently sterilizable, so that the wand itself is reusable indefinitely between multiple patients." These features create a medically safe and sterile environment for each patient.

Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Ohsawa, Gofman, Parluski, Cooper and Irwin to obtain the specified claimed elements of Claim 35.

Regarding Claim 36: (Currently Amended) the abutting portion comprises a flexible material

with a cylindrical shape ("The optical apparatus...elongate member comprises a tube having a shape of a right circular cylinder." at column 38, line 42; further "Exterior details of the hand-held wand 32 are shown in FIG. 7. The wand 32 comprises an elongate, generally cylindrical body member 45 that includes a connecting end 48 and a delivery end 50." at column 13, line 55).

Regarding Claim 37: (Currently Amended) Irwin teaches the abutting portion comprises a material which prevents or reduces influence of ambient light ("The conduit 3108 is a pipe or tube comprising four planar rectangular sidewalls 3110; see FIGS. 26A 26C. The rectangular sidewalls 3110 are joined together at a total of four edges 3112, each sidewall adjoined by two adjacent orthogonally disposed sidewalls at two edges. The conduit 3108 may be hollow or may be filled with a material that is preferably optically transmissive to the UV light." also refer to column 30, line 11).

Regarding Claim 38: (Currently Amended) Irwin teaches the abutting portion is detachably coupled to a casing of the photographing apparatus (Refer to column 34, line 10).

7. Claims 42-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elbaum et al. (US 6,201,880 B1) in combination with Gofman et al (US 20040076921 A1), Cooper et al.(US 5051823 A) and Ohsawa (US 6856354 B1).

Regarding Claim 42: (New) Elbaum teaches an image processing system (Refer to Figure 1, numeral 10) comprising: a photographing apparatus (Refer to Figure 1, numeral 24 "an electronic camera 24"); and a processing apparatus (Refer to Figure 1, numeral 26) wherein the photographing apparatus comprises:

an image pick-up device unit which picks-up the subject image formed by the image pick-up optical system and outputs an image signal (Refer to Figure 1, numeral 20; "The image plane of an electronic camera 24 may be optically coupled to the image input portion 20 of the handpiece 12 through a separate optical fiber or fiber optic bundle 23. Preferably, the camera is a digital electronic camera having a charge-coupled-device (CCD) imaging array coupled to the optical fiber 23. The CCD may be located within the handpiece 12 as well, as discussed with respect to the embodiment of FIG. 2. A CCD is preferred because of its high signal-to-noise ratio and its direct generation of digital signals for immediate processing. An intra-oral camera could also be positioned in the mouth, adjacent the side of the tooth opposite the side being illuminated. Alternatively, a video camera may be used and the video images subsequently digitized." at column 6, line 1-14);

Gofman teaches wherein the photographing apparatus comprises: spectroscopic distributions varied in at least a visible light range (Refer to Figure 6a for example, "FIGS. 6a and 6b illustrate aspects of a carrier 57 for physically packaging the LEDs 22. By way of example, carrier 57 comprises four surface mount LEDs 22 (available, as described above, as LUMILED LEDs from Luxeon)..." at paragraph [0038]);

an image pick-up optical system which forms a subject image of a subject illuminated by the light-emitting devices (Refer to Figure 8a, paragraph [0037-0038, 0043-0044])

Cooper teaches a control unit which controls the photographing apparatus to capture images in one of a spectroscopic image capturing mode and a moving image capturing mode, selectively ("At the proximal end (not shown) of handle 101 is located one or more connectors for

Art Unit: 2624

connection, via a cable assembly (not shown) to a video processor and control unit and a source of laser energy." at column 3, line 62)

wherein in the spectroscopic image capturing mode, the control unit controls the plurality of light-emitting devices, which are selected according to the characteristics of the spectroscopic distributions of the light emitting devices, to sequentially light-on, and the control unit controls the image pick-up device unit to capture sequential spectroscopic still images of the subject simultaneously with the sequential lighting-on of the light-emitting devices; and wherein in the moving image capture mode, the control unit one of: (i) controls a single specific primary color or a plurality of specific primary colors of the light-emitting devices selected from the plurality of light emitting devices to sequentially or simultaneously light-on, and controls the image pick-up device unit to capture a moving image while the specific primary color of the light-emitting devices are lighted-on, and (ii) controls a plurality of groups of the light-emitting devices to sequentially light-on group by group, the groups including a group of the light-emitting devices that belong to blue in the visible light range, a group of the light-emitting devices that belong to green in the visible light range, and a group of the light-emitting devices that belong to red in the visible light range, and controls the image pick-up device unit to capture a moving image while the groups of the light-emitting devices are sequentially lighted-on; ("As a feature of one embodiment of this invention, the handle of the dental camera includes means for communicating all appropriate signals and fluids to and from the camera head and the laser light emission port, and, if desired, valves and switching means located on the handle for controlling such communication." at column 2, line 65)

Specifically, Cooper teaches a control unit that includes light sources (light emitting devices) to handle all means of communication of all of the appropriate signals for connecting the dental instrument with the laser device and image processing apparatuses.

Ohsawa teaches and wherein the processing apparatus comprises a calculating unit which performs an image calculation based on an output of the image pick-up device ("and a color correction device for calculating tristimulus value data of the object and converting the data into an input signal to a CRT monitor by using monitor profile data." at abstract).

Elbaum, Gofman, Cooper and Ohsawa are combinable because they are in the same field of image processing including dental instruments and an apparatus for light emission elements.

All of the claimed elements were known in the prior art and one skilled in the art could have been combined the teachings of Elbaum in combination with Gofman, Cooper and Ohsawa as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

The suggestion/motivation for doing so would have been to create " dental instrument including a laser device and an electronic video dental camera is provided having a single handle and a convenient shape, thereby being readily manipulated by dentists who are universally familiar with the manipulation of prior art dental tools. A dental instrument constructed in accordance with the teachings of this invention includes a handle to be held by the user, a distal portion which is to be placed inside the patient's mouth, a laser light emission port located at or near the

distal end, means for transporting laser light from an external laser source to the laser light emission port, and a camera head located at or near the distal end of the device, with the camera head being formed at an angle to the handle in order to provide a field of view which includes the portion of the patient which is being treated by the laser light emanating from the laser light emission port." at column 2, line 32+, Cooper.

Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Elbaum, Gofman, Cooper and Ohsawa to obtain the specified claimed elements of Claim 42.

Regarding Claim 43: (New) Ohsawa teaches a color reproduction calculating unit for calculating image data for displaying an image of the subject which is color-reproduced based on the spectroscopic still images photographed by the photographing apparatus("A color correction device can perform color reproduction without being influenced by changes in the color perception characteristics of a person such as chromatic adaptation by reproducing a virtual illumination light spectrum having tristimulus values equal to those of the observation illumination light without measuring any observation illumination light spectrum." at abstract)

Regarding Claim 44: (New) Ohsawa teaches an input profile calculating unit for generating an input profile using at least one of the characteristics of spectroscopic distributions of the light-emitting devices, and characteristic data of the image pick-up optical system and the image pick-up device unit ("The virtual illumination light spectrum calculation means calculates a spectrum satisfying the relation that linear conversion of a product of a spectral sensitivity of the color image input means and a photographing illumination light spectrum is a product of a color matching function and the virtual illumination light spectrum." at column 2, line 53) and wherein

the color-reproduction calculating unit comprises an XYZ estimation calculating unit for generating image data of XYZ tristimulus values from the spectroscopic still images using the input profile and a color matching function ("color estimation means for calculating tristimulus values by correcting a color image signal obtained by the color image input means, and color image output means for outputting a color based on the tristimulus values obtained by the color estimation means..." at column 2, line 62)

Regarding Claim 45: (New) Ohsawa teaches an image determination calculating unit which determines or analyzes the subject based on the spectroscopic still images and outputs a result of the determining or analyzing (Refer to Figure 3, numeral 12; "color image output means for outputting a color based on the tristimulus values obtained by the color estimation means..." at column 2, line 40).

Response to Arguments

8. Applicant's arguments filed 01 December 2008 have been fully considered and a complete response to those remarks is provided below.

Summary of Remarks:

A. At page 11 of applicant's remarks, "Claim 23 is fully supported by the written description in the specification as required; Claim 26 and 29-38 have been amended to be consistent with the changes to claims 23 and claims 24, 25, 27, 28 and 39-41 have been canceled without prejudice, and further requests that the rejection under 35 USC 112, first paragraph be withdrawn.

Examiner's Response:

B. The Examiner withdraws the 35 USC 112, first paragraph rejection regarding claims 23-41.

Summary of Remarks:

C. The prior art references do not disclose or suggest a control unit which controls different light emitting devices in the above described manner of the claimed present invention.

Examiner's Response:

D. Applicant's arguments with respect to claims 23, 26, 29-38 have been considered but are moot in view of the new ground(s) of rejection. Claims 23, 26-38 are newly rejected under the combination of the teachings of Ohsawa, Gofman, Parluski and Cooper.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mia M. Thomas whose telephone number is (571)270-1583. The examiner can normally be reached on Monday-Thursday 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vikkram Bali can be reached on 571-272-7415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mia M Thomas/
Examiner, Art Unit 2624

/Vikkram Bali/
Supervisory Patent Examiner, Art Unit 2624